

PATENTS
Attorney Docket No. CEO-012.02

IN THE SPECIFICATION:

On page 1, please add the following paragraph before the section entitled "Field of the Invention", currently appearing on lines 3-11.

CLAIM OF PRIORITY

This application is a continuation of U.S.S.N. 09/808,936 filed March 15, 2001, now issued Patent No. 6,675,134, entitled "Performance Assessment Of Data Classifiers," the contents of which are incorporated herein by reference in their entirety.

Please amend the paragraphs starting on page 4, line 26, and ending on page 5, line 21 as follows:

According to a first aspect of the invention there is provided a method of assessing the performance of a data classifier operable to generate an element of output data in response to an element of input data [[, the method comprising the steps of:]] The method includes the steps of providing test data comprising elements of test input data and corresponding elements of test output data; operating the data classifier to generate elements of result output data in response to the elements of test input data; determining a measure of difference between each element of test output data and each corresponding element of result output data; forming a distribution function of the [[said]]measures of difference; and forming a measure of performance of the data classifier from the [[said]]distribution function.

The distribution function provides information on the way in which errors or mismatches between the test output data and result output data are distributed. A given rms-error based on the differences between a number of elements of "ideal" test output data and actual result output data may result from a lesser [[lesser]]number of large differences or a

FHBOSTON/1101851.2

PATENTS
Attorney Docket No. CEO-012.02

greater number of small differences. Depending on the practical use to which the data classifier is to be put, the latter may be satisfactory, while the former may be unacceptable. By determining the[[said]] distribution function, a measure of data classifier performance may be formed which is better tailored to a particular practical application.

Please amend the paragraphs starting on page 6, line 33, and ending on page 7, line 36 as follows:

According to a second aspect of the invention, a weighting function is applied directly to the [[said]]measures of difference, and a measure of performance of the data classifier is formed from the resulting weighted measures of difference.

According to a third aspect of the invention, there is provided a method of training a data classifier that is operable to generate output data in response to input data[[, the method comprising the steps of:]] The method includes training the data classifier; forming a measure of performance of the data classifier using a method described herein; and optionally retraining the data classifier in response to the [[said]]measure of performance.

For example, the data classifier could be repeatedly retrained until the measure of performance reached a threshold value. Typically, retraining will be carried out only if it is expected to improve the [[said]]measure of performance. Preferably, the data used for training and retraining includes some or all of the test data.

According to a fourth aspect of the invention there is provided a data classifier system[[comprising:]] that includes a data classifier operable to generate elements of result output data in response to elements of test input data, wherein the [[said]]elements of test input data also correspond[[ing]] to elements of test output data; a difference generator operable to determine a measure of difference between each element of test output data and each corresponding element of result output data; a distribution function generator operable to form a distribution function of the [[said]]measures of difference; and a performance

FHBOSTON/1101851.2

PATENTS
Attorney Docket No. CEO-012.02

measure generator operable to form a measure of performance of the data classifier from [[said]] the distribution function.

Please amend the paragraph starting on page 8, line 16, and ending on line 21 as follows:

Embodiments of the invention will now be described, with reference to the accompanying drawing[[,]].

BRIEF DESCRIPTION OF THE DRAWING

Figure 1 which is a schematic of a system for assessing the performance of a data classifier. In the drawing, in which data units are shown as rectangles, functional units as truncated rectangles, and data flows as arrows.

DETAILED DESCRIPTION